

CLAIMS

1. Element with high mechanical resistance and high vibration absorption, characterized in that it comprises at least one internal core composed of at least one first material having predominantly high mechanical characteristics, united simply through chemical bonding, to at least a second material with predominantly highly elastic characteristics.
2. Element according to claim 1, characterized in that said first and second materials are bonded without the use of adhesives.
3. Element according to one or more of the preceding claims characterized in that said first material is composed of a thermoplastic resin in which a plurality of natural and/or synthetic fibers are sunk.
4. Element according to one or more of the preceding claims characterized in that said synthetic fibers are composed of glass fiber.
5. Element according to one or more of the preceding claims characterized in that said second material is composed of an elastomeric polymer.
6. Element according to one or more of the preceding claims characterized in that said thermoplastic resin is an engineered polyurethane thermoplastic polymer, industrially recognised under the name ETPU (engineering thermoplastic polyurethane)
7. Element according to one or more of the preceding claims characterized in that said second material is composed of

thermoplastic polyurethane.

8. Element according to one or more of the preceding claims characterized in that the core is covered with a layer in a third material composed of an elastomeric polymer.

9. Element according to one or more of the preceding claims characterized in that said core comprises at least two elongated elements created using pultrusion.

10. Element according to one or more of the preceding claims characterized in that said elongated elements are rod-shaped or disk-shaped.

11. Element according to one or more of the preceding claims characterized in that a bearing made of said second material is inserted between said elongated elements.

12. Element according to one or more of the preceding claims characterized in that said rod-shaped elements have at least one flat surface and one curved surface, said bearing being inserted between said flat surfaces of said adjacent rod-shaped elements.

13. Method for implementing an element with high mechanical resistance and high vibration absorption, characterized in that it comprises the automatic union through chemical bonding of a first material having predominantly high mechanical characteristics, with at least a second material having predominantly highly elastic characteristics, in order to form a core to be coated with at least one third material.

14. Method according to the preceding claim characterized in fact that the union between the first and second material

occurs without the use of an adhesive, but with the application of heat at an established temperature.

15. Method according to one or more of the preceding claims characterized in that said first material is composed of a thermoplastic resin in which a plurality of natural and/or synthetic fibers are sunk.

16. Method according to one or more of the preceding claims characterized in that said synthetic fibers are composed of glass fiber.

17. Method according to one or more of the preceding claims characterized in that said second material is composed of thermoplastic polyurethane.

18. Method according to one or more of the preceding claims characterized in that said thermoplastic resin is an engineered polyurethane thermoplastic polymer, industrially recognised under the name ETPU (engineering thermoplastic polyurethane)

19. Method according to one or more of the preceding claims characterized in that second material is composed of an elastomeric polymer, preferably of polyurethane type.

20. Method according to one or more of the preceding claims characterized in that said third material is composed of an elastomeric polymer.

21. Method according to one or more of the preceding claims characterized in that said method includes at least one stage in which said first material is obtained through pultrusion.

22. Method according to one or more of the preceding claims

characterized in that method includes at least one coextrusion stage at an established temperature to unite said first material with said second material.

23. Method according to one or more of the preceding claims characterized in that said method includes a thermoforming stage to model said third material into an ergonomical shape.

24. Element with high mechanical resistance and high vibration absorption and the method for implementing the same, as described, claimed and represented in the enclosed drawing tables.